

WHAT IS CLAIMED IS:

1. A video playback unit comprising:

video playback means for reading in a designated video file and outputting a video of the video file for playback;

5 scene description file read-in means for reading in a scene description file which describes a scene inside the video file;

means for outputting a time information sequence existing before and after the playback time of the video  
10 within time information described in the scene description file;

means for outputting the still image sequence corresponding to the time information displayed, wherein the still image is described in the scene description file;

15 means for renewing the display of the time information sequence and the still image sequence by synchronizing with the playback time of the video; and

display means for displaying said video, time information sequence and still image sequence.

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2. The video playback unit according to claim 1, wherein

said video playback means starts to play back the video  
25 from the time decided by the time information selected from within at least one of said time information sequence and still image sequence or the time information of a still image.

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3. The video playback unit according to claim 1,  
comprising:

5        a cache memory storing in advance said scene description  
file, wherein

         said scene description file read-in means reads the  
time information sequence and a still image display sequence  
from the cache memory when the display of said time  
10      information sequence and the still image sequence are  
changed.

4. A video delivery unit having:

15      means for delivering a video data related to the  
designated video file from a server at a constant  
transmission rate; and

         means for delivering a scene description data which  
describes the scene of the video file from the server by  
20      synchronizing with the video data at a constant transmission  
rate.

5. The video delivery unit according to claim 4,  
25      wherein

         the transmission rate of said scene description data  
is decided by a file size and a scene information described

in the scene description file.

6. A video playback unit for receiving said video data  
5 and said scene description data which are delivered from  
the video delivery unit according to at least one of claim  
4 and 5, comprising:

a cache memory for storing the video data and the scene  
description data in a received order;

- 10 video playback means for reading in the video data  
stored in the cache memory and outputting the video data  
for playing back;

scene description file read-in means for reading in  
the scene description file stored in the cache memory;

- 15 means for outputting the time information sequence  
existing before and after the playback time of the video  
wherein the time information is described in the scene  
description data:

- means for outputting the still image sequence  
20 corresponding to the time information displayed wherein the  
still image is described in the scene description data;

means for changing a display of the time information  
sequence and the still image sequence by synchronizing the  
playback time of the video; and

- 25 display means for displaying said video, time  
information sequence and still image sequence.

7. The video playback unit according to claim 1,  
wherein

said scene description file read-in means reads in the  
5 scene description file corresponding to the predetermined  
number of time information sequences and still image  
sequences.

10 8. The video playback unit according to claim 1,  
wherein

means for outputting said time information sequence  
and the still image sequence changes the time information  
sequence and the still image sequence being displayed to  
15 the time information sequence to be displayed next and the  
still image sequence corresponding to the time information  
sequence, respectively, when said playback time of the video  
has passed designated time information.

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9. The video playback unit according to claim 6,  
comprising

means for transmitting the time which is decided by  
the time information selected within said time information  
25 sequence and still image sequence or the time information  
of the still image to the video delivery unit;

wherein the video data and the scene description data

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corresponding to the time information are received from the video delivery unit, the received video data is played back and displayed, and the time information sequence and the still image sequence from the received scene description data are displayed.

10. The video playback unit according to claim 1, wherein

10        said time information sequence is at least one of the time information sequence which increases by a designated time step, the time information sequence of the top of a cutting point which shows a scene change of the video, the time information sequence of a key frame point which shows

15        a center of the video scene, the time information sequence which shows a switching point from non-audible sound to audible sound of the audio, the time information sequence which shows a time when a specific effective sound such as clapping, laughter has generated, the time information

20        sequence which shows a time when a specific video such as a telop and a CG video has generated and the time information sequence designated arbitrarily.

25        11. A computer readable recording medium recorded with a program comprising:

         a process for reading in a designated video file and

for outputting the video of the video file for playback;

a process for reading in the scene description file which describes the scene inside the video file;

a process for outputting the time information sequence  
5 existing before and after the playback time of the video wherein the time information is described in the scene description file;

a process for outputting the still image sequence corresponding to the time information displayed wherein the  
10 still image is described in the scene description file; and

a process for changing the display of the time information sequence and the still image sequence by synchronizing with the playback time of the video.

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12. The computer readable recording medium according to claim 11, further being recorded with a program wherein

it is determined whether the playback time of said video has passed a designated time information or not and, when  
20 determined that it has passed, the time information sequence and the still image sequence being displayed are changed to the time information sequence and the still image sequence corresponding to the time information sequence to be displayed next and outputted.

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13. A video playback unit of a plurality of videos

comprising:

video description file processing means for reading  
in a video description file of a designated video group;

main video playback means for playing back a first main  
5 video file designated by the video information described  
in the video description file;

proxy video playback means for playing back a second  
proxy video file designated by the video information  
described in said video description file; and

10 display means for displaying the first main video and  
the second proxy video played back by said main video playback  
means and proxy video playback means,

wherein said proxy video file is small in a file size  
or a coded bit rate in contrast to said main video file.

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14. The video playback unit of a plurality of videos  
according to claim 13, wherein

said second proxy video file is displayed inside or  
20 outside the display screen of said first main video file.

15. The video playback unit of a plurality of videos  
according to the claim 14, comprising:

25 means for changing the playback display of the second  
proxy video file to the playback display of the second main  
video file; and

means for changing the playback display of the first main video file to the playback display of the first proxy video file;

wherein the first proxy video file is displayed inside  
5 or outside the display screen of the second main video file.

16. A video playback unit of a plurality of videos comprising:

10 video description file processing means for reading in a video description file of a designated video group;  
proxy video playback means for playing back the proxy video files of a plurality of video files designated by the video information described in the video description file;  
15 means for selecting one video file from the displayed proxy video file; and

means for changing the selected proxy video file to the playback display of the main video file.

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17. A video playback unit of a plurality of videos comprising:

video description file processing means for reading in a video description file of a designated video group;  
25 main video playback means for playing back the first main video file designated by the video description file;  
proxy video playback means for playing back the first



to the nth proxy video files designated by the video description file;

means for selecting an arbitrary proxy video file from the displayed n pieces of the proxy video files; and

5 means for switching the first main video file being displayed to the main video playback display of the arbitrary proxy video file.

10 18. The video playback unit of a plurality of videos according to claim 17, wherein

the playback time of the arbitrary proxy video is taken as a playback starting time of the optional main video file at the time when switched to the playback display of said  
15 arbitrary main video file.

19. A video playback unit of a plurality of videos comprising:

20 video description file processing means for reading in a video description file of a designated video group;  
main video playback means for playing back the first main video file designated by the video information described in the video description file;

25 proxy video playback means for playing back the second to the nth proxy video files designated by the video information described in the video description file;

means for selecting an arbitrary proxy video file from the playback proxy video file; and

means for changing the playback display of the arbitrary proxy video file to the playback display of the main video file, and changing the playback display of said first main video file to the playback display of the proxy video file.

20. The video playback unit of a plurality of videos according to claim 19,

the playback time of the arbitrary proxy video file is taken as the playback starting time of the main video file at the time when said arbitrary proxy video file is switched to the playback display of the main video file, and the playback time of the first main video file is taken as the playback starting time of the arbitrary proxy video file at the time when said first main video file is switched to the playback display of the proxy video file.

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21. The video playback unit of a plurality of videos according to claim 13, comprising:

means for reading in the scene description file which describes the scene inside the selected main video file, wherein the scene inside the main video file is displayed on said display means based on the scene information described in the scene description file.

22. The video playback unit of a plurality of videos according to claim 21, wherein

5 the scene information described in said scene description file are scenes existing before and after the playback time of said main video file.

10 23. The video playback unit of a plurality of videos according to claim 21, wherein

the scene information described in said scene description file is the time information and the still image, the video playback unit comprising:

15 means for outputting the time information sequence existing before and after the playback time of said main video file within said time information; and

means for outputting the still image sequence corresponding to said time information sequence within said 20 still image, wherein

said time information sequence and still image sequence are displayed on said display means.

25 24. The video playback unit of a plurality of videos according to claim 23, wherein

the displays of said time information sequence and said

still image sequence are changed by synchronizing with the playback time of said main video file.

5 25. A video delivery unit comprising:

means for delivering a designated video description file from a server;

means for delivering the main video file and the proxy video file described in the video description file from the  
10 server at a constant transmission rate;

means for delivering the scene description file which describes the scene of the video file described in the video description file from the server by synchronizing with said main video data at a constant transmission rate.

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26. The video delivery unit according to claim 25, wherein

the transmission rate of said scene description file  
20 is decided from the file size and the scene information described in the scene description file.

27. A video playback unit which receives said main  
25 video file, the proxy video file and the scene description file delivered from the video delivery unit according to one of claims 25 and 26, the video playback unit of a plurality

of videos comprising:

means for reading in said video description file;

a cache memory for storing said main video file, the proxy video file and the scene description file in a received

5 order;

means for reading in the scene description file content stored in the cache memory;

means for outputting the time information sequence existing before and after the playback time of the video, wherein the time information is described in the scene description file;

10 means for outputting the still image sequence corresponding to the time information displayed, wherein the still image described in the scene description file;

15 main video playback means for playing back the main video file designated by the video information described in the video description file;

proxy video playback means for playing back the proxy video file designated by the video information described in the video description file;

20 means for displaying said main video, proxy video, time information sequence and still image sequence; wherein

means for outputting said time information sequence changes the displays of the time information sequence and the still image sequence by synchronizing with the playback time of the main video file.

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28. The video playback unit according to claim 27,  
wherein

means for outputting said time information sequence  
5 changes the time information sequence and the still image  
sequence being displayed to the time information sequence  
to be displayed next and the still image sequence  
corresponding to the time information sequence,  
respectively, when the playback time has passed the  
10 designated time information.

29. The video playback unit according to claim 13,  
wherein said proxy video file uses the abstract video of  
15 the main video file.

30. The video playback unit according to claim 29,  
wherein the abstract video utilizes the abstract video formed  
20 by combining the videos which abstracts a part within each  
section which divides the main video file into a  
predetermined time section.

25 31. The video playback unit according to claim 29,  
wherein the abstract video utilizes the abstracted video  
formed by combining the videos which extracts a part within

each shot section which divides the main video file into shots.

5           32. The video playback unit according to claim 29, wherein said abstracted video utilizes the abstracted video formed by combining the still images which extracts the videos of the several times within the main video file.

10           33. A computer readable recording medium comprising the steps of:

          reading in the video description file of a designated video group;

15           playing back a first main video file designated by the video information described in the video description file;

          playing back a second proxy video file designated by the video information described in the video description file; and

20           displaying the first main video and the second proxy video played back by said steps.